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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,233	01/13/2004	Poul Egon Bertelsen	5568.2CON(71432)	5334

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EXAMINER	
SASAN, ARADHANA	
ART UNIT	PAPER NUMBER
1615	
MAIL DATE	DELIVERY MODE
03/11/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/758,233	BERTELSEN ET AL.	
	Examiner	Art Unit	
	ARADHANA SASAN	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *68,70-72,75-80,82,83 and 85-114* is/are pending in the application.

4a) Of the above claim(s) *97-107 and 112-114* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *68,70-72,75-80,82,83,85-96 and 108-111* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/6/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Application

1. The remarks and amendments filed on 12/21/07 are acknowledged.

2. Claims 68, 70-72, 75-80, 82-83 and 85-114 are pending.

3. Claims 68, 70-72, 75-80, 82-83, 85-96 and 108-111 are included in the prosecution.

Response to Arguments

Rejections of claims under nonstatutory obviousness-type double patenting

4. Applicant acknowledged the opportunity to file a terminal disclaimer, see Page 10, filed 12/21/07. Until such time that a terminal disclaimer is filed and approved, the rejection of claims 68, 70-72,75-80, 82-83, 85-96, and 108-111 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 8-17, 22-29, and 34-37 of U.S. Patent No. 6,713,089 ('089 hereafter) will be maintained.

Rejection of claims 67-72, 74-78, and 81-83, and 85-95 under 35 USC § 103(a)

5. Applicant's arguments, see Page 11, filed 12/21/07, with respect to the rejection of claims 67-72, 74-78, and 81-83, and 85-95 under 35 U.S.C. 103(a) as being unpatentable over Penkler et al. (US 5,854,226) have been fully considered and are persuasive in view of the amendments to claims 68 and 70 which include the limitation of "wherein the quick release pharmaceutical composition contains the active substance in contact with an alkaline substance". Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of

Nemoto et al. (JP 03-240729). Since this new ground of rejection was necessitated by applicant's amendments, the office action is made final.

Rejection of claims 79-80 and 96 under 35 USC § 103(a)

6. Applicant's arguments, see Page 11, filed 12/21/07, with respect to the rejection of claims 79-80 and 96 under 35 U.S.C. 103(a) as being unpatentable over Penkler et al. (US 5,854,226) in view of Sallman et al. (US 4,296,128) have been fully considered and are persuasive in view of the amendments to claims 68 and 70 which include the limitation of "wherein the quick release pharmaceutical composition contains the active substance in contact with an alkaline substance". Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Nemoto et al. (JP 03-240729). Since this new ground of rejection was necessitated by applicant's amendments, the office action is made final.

Rejection of claim 73 under 35 USC § 103(a)

7. Applicant's cancellation of claim 73 renders the rejection over Penkler et al. (US 5,854,226), and further in view of Penkler (WO 95/32737) moot.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 68, 70-72, 75-80, 82-83, 85-96, and 108-111 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 8-17, 22-29, and 34-37 of U.S. Patent No. 6,713,089 ('089 hereafter). Although the conflicting claims are not identical, they are not patentably distinct from each other.

The claim limitations of each of the instant claims 68, 70-72, 75-80, 82-83, 85-96 would be obvious over '089.

Instant claims 68 and 70 would be obvious to a person with ordinary skill in the art over claim 1 of '089 which covers the claim limitations of: solubility of the active (at the most 0.1% w/v in 0.1N hydrochloric acid at room temperature), particle size of the active (at least 90% w/w of the active particles pass through a 180 μm sieve), pK_a of the active (at the most 5.5), particulate composition formed after powder contacting an aqueous medium, particle size of the particulate composition (at least 50% of the particles pass through a 180 μm sieve), release rate of the active (at least 50% w/w within the first 20 minutes) using the 0.07 N hydrochloric acid as the dissolution medium, and the composition comprising a pharmaceutically acceptable excipient. The difference between the instant claims and those of '089 is that '089 claim 1 discloses that when the dissolution of the pharmaceutical composition is tested, the active

substance "dissolves", as opposed to "releases" as in instant claim 68. A person having ordinary skill in the art would find that when a pharmaceutical composition is subjected to a particular dissolution test, and a certain percentage of the active ingredient "dissolves", it means that the active ingredient is "released" from the pharmaceutical composition into the dissolution medium.

Instant claim 71 (with the release rate limitation of at least 55% w/w of active within the first 20 minutes of the dissolution test) would be obvious to a person with ordinary skill in the art over claim 2 of '089. The difference between "dissolves" and "releases" is discussed above.

Instant claim 72 (with the limitations of solubility of the active as at the most 0.05% w/v in 0.1N hydrochloric acid at room temperature) would be obvious to a person with ordinary skill in the art over claim 3 of '089.

The limitations of instant claims 76-80, 82-83 and 85-96 (excipients, filler having binding properties, calcium hydrogen phosphate as filler, mean particle size of filler at the most 140 μm, alkaline substances, antacid-like substances, sodium hydrogen carbonate, mean particle size of antacid-like substance at the most 250 μm, NSAID (non-steroid anti-inflammatory drug) as an active substance, lornoxicam as an NSAID, further active drug substances (paracetamol etc.), dosage of active in the composition (1mg – 1.6g), dosage of lornoxicam in the composition (4, 3, 12, 16, 20, 24, 28, 32 or 36mg), water content of the composition at the most 5% w/w, and calcium hydrogen phosphate) would be obvious to a person with ordinary skill in the art over claims 10-17, 22-29, and 34-37 of '089.

Since the instant application claims a quick release pharmaceutical composition and the claim limitations of the composition (active, alkaline substance, particle size, release rate, particulate composition, excipients), it is obvious over claims 1-3, 8-17, 22-29, and 34-37 of '089 and thus, they are not patentably distinct over each other.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 68, 70-72, 75-80, 82-83, 85-86, 91-92, 95-96 and 108-111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nemoto et al. (JP 03-240729).

The claimed invention is a quick release (at least 50% w/w of the active within the first 20 minutes of a dissolution test) pharmaceutical composition for oral administration, comprising an active substance, such as the non-steroidal anti-inflammatory drug (NSAID) lornoxicam, that is poorly soluble (solubility of at the most 0.1% w/v in 0.1 N hydrochloric acid at room temperature), and is a weak acid (pK_a at the most 5.5). The composition is based on a powder (with a particle size where at least 90% of the particles of the powder pass through a 180 μm sieve), which contacts an aqueous medium to form a particulate composition (with a particle size where at least 50% w/w of the particles pass through a 180 μm sieve).

Nemoto teaches "an oral solid preparation containing one or more types of antacids that accelerates the absorption of oxicam antiinflammatory drugs" (Page 1,

claim 1). Sodium hydrogen carbonate is disclosed as the antacid (Page 1, claim 3). The antacid "accelerates the absorption of oxicam antiinflammatory drugs" (Page 2). Granules of the antacid and oxicam antiinflammatory drug are disclosed (Page 3). The granules are formed in a mixture of alcohol and purified water (Page 4). Capsules and tablets are manufactured by adding a lubricant to the granules (Page 4). The solubility of the prepared tablets in artificial gastric juice was greater than 50% within 20 minutes of the test (Page 9, Table 3).

Nemoto does not expressly teach testing the dissolution of the composition by employing 0.07N HCl as the dissolution medium.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make an oral solid preparation containing one or more types of antacids that accelerates the absorption of oxicam antiinflammatory drugs, as suggested by Nemoto, and use the dissolution method by employing 0.07N HCl acid as the dissolution medium, and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because artificial gastric juice has a pH of approximately 1.2. One with ordinary skill in the art would know that using a 0.07N HCl acid solution will also lead to a pH that simulates the gastric juices.

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of

ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Regarding instant claims 68 and 70, the limitation of the active substance would have been obvious over the oxicams taught by Nemoto (Page 1, claim 1). The limitation of the active substance in contact with the alkaline substance and the limitation of a particulate composition would have been obvious over the granules of antacid and oxicam disclosed by Nemoto (Page 3). The limitation of the dissolution method employing 0.07N HCl acid as dissolution medium would have been obvious over the artificial gastric juice (with an acidic pH) taught by Nemoto (Page 9, Table 3).

Regarding instant claim 71, the limitation of at least 55% w/w release would have been obvious over the solubility of preparations 3-9 as disclosed by Nemoto (Page 9, Table 3).

Regarding instant claim 72, the solubility of the active substance would have been obvious over the oxicam actives taught by Nemoto (Page 1, claim 1).

Regarding instant claims 75-79, the limitation of an excipient would have been obvious over the calcium hydrogen phosphate taught by Nemoto (Page 6, Embodiment 9).

Regarding instant claim 80, the limitation of the particle size of the filler would have been obvious over the calcium hydrogen phosphate taught by Nemoto (Page 6, Embodiment 9). One with ordinary skill in the art would modify the particle size of the filler during the process of routine optimization and the recited particle size (140 μm)

would have been an obvious variant unless there is evidence of criticality or unexpected results.

Regarding instant claims 82-83, 95-96 and 108, the antacid would have been obvious over the sodium hydrogen carbonate and calcium hydrogen phosphate disclosed by Nemoto (Page 1, claim 3). The limitation of the mean particle size of the antacid-like substance would have been obvious because one with ordinary skill in the art would vary the particle size of the antacid during the process of routine experimentation depending on the desired attributes of the composition. The recited particle size (at the most 297 μm) would have been an obvious variant unless there is evidence of criticality or unexpected results.

Regarding instant claims 85-86, the active substance would have been obvious over the piroxicam and tenoxicam disclosed by Nemoto (Page 2, 3rd paragraph).

Regarding instant claims 91-92, the dosage of the active substance would have been obvious over the 2mg of chlortenoxicam and tenoxicam disclosed by Nemoto (Page 5, Table 1).

Regarding instant claims 109-110, the dissolution test would have would have been obvious over the artificial gastric juice (with an acidic pH) taught by Nemoto (Page 9, Table 3). A person skilled in the art would have found it obvious to test the dissolution/release of the active at various pH levels (especially acidic pH levels which are present in gastric conditions) during the process of routine optimization to ensure the release of the active ingredient.

Regarding instant claim 111, the coated tablet would have been obvious over the coating of tablets taught by Nemoto (Page 4, 2nd full paragraph).

12. Claims 87-90 and 93-94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nemoto et al. (JP 03-240729) in view of Penkler et al. (US 5,854,226).

The teaching of Nemoto is stated above.

Nemoto does not expressly teach lornoxicam as the active substance.

Penkler et al teaches a pharmaceutical composition for oral administration comprising an inclusion complex of a non-steroidal anti-inflammatory drug, including lornoxicam (Col. 5, lines 66-67), an alkaline earth metal bicarbonate, and further active ingredients (Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make an oral solid preparation containing one or more types of antacids that accelerates the absorption of oxicam antiinflammatory drugs, as suggested by Nemoto, combine it with a lornoxicam and alkaline earth metal bicarbonate containing composition, as suggested by Penkler, and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because lornoxicam is a known antiinflammatory drug. One with ordinary skill in the art would find it obvious to substitute lornoxicam for the oxicams used by Nemoto.

Regarding instant claim 87, the limitation of the lornoxicam would have been obvious over the lornoxicam taught by Penkler (Col. 5, lines 66-67).

Regarding instant claims 88-90, the further active drug substance would have been obvious over the further active drug substance, including paracetamol as taught by Penkler (Col. 8, lines 9-12).

Regarding instant claim 93, the dosage of the active substance would have been obvious over the unit compositions of lornoxicam (4mg) taught by Penkler (Figure 2). One with ordinary skill in the art would vary the dosage of the active ingredient, lornoxicam, in order to optimize the release/dissolution profile, and stability.

Regarding instant claim 94, the water content limitation would have been obvious over the drying step (after the addition of water and mixing steps) as taught by Penkler (Col. 4, line 9). A person skilled in the art would reduce the water content of the composition in order to improve shelf life and minimize interactions and leaching, therefore, the water content limitation would have been an obvious variant found during routine optimization.

Conclusion

13. No claims are allowed.

14. Since the new ground of rejection was necessitated by applicant's amendments, **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aradhana Sasan whose telephone number is (571) 272-9022. The examiner can normally be reached Monday to Thursday from 6:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached at 571-272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Aradhana Sasan/
Examiner, Art Unit 1615

/Michael P Woodward/
Supervisory Patent Examiner, Art Unit 1615